

WHAT IS CLAIMED IS:

1. An antenna system with a controlled directional pattern, including at least three planar directional antennas, each of which is made as a dielectric plate carrying a planar active element of the above antenna mounted by mounting elements parallel to and spaced from said plate; with the plate surface that faces the active element being metallized and serving as an antenna reflector; said plates being interconnected along their edges in such a way as to form lateral facets of a hollow frame shaped as a regular prism with metallized external surfaces and set on its base; the end face of said frame being made as a dielectric plate having its external surface metallized and carrying an antenna commutation switch on its internal surface; said antenna switch being connected to the control unit of the antenna commutation switch by means of control communications lines and connected to said active antenna elements by means of high-frequency communications lines.

2. The antenna system of claim 1, wherein said high-frequency lines are made as microstrips on the inner surface of all said frame faces; and said control communications lines are located on the inner surface of the end face and, at least, on one lateral facet of the frame.

3. The antenna system of claim 1, wherein each lateral facet of the frame carries on its external surface at least one additional planar element of the planar directional antenna mounted parallel to and spaced from said lateral facet by means of mounting elements; with said active antenna elements, which are located on the same frame facet, being vertically spaced from each other along the frame axis; and the inner surface of each lateral frame facet carrying a power divider made as sections of a microstrip line, by which the antenna commutation switch is connected to said active antenna elements.

4. The antenna system of claim 1, wherein the metallized external surface of the end face of the frame carries a planar active element of the planar directional antenna mounted by mounting elements parallel to and spaced from said external surface; the latter

serving as antenna reflector; and the antenna commutation switch is connected to said active element by means of a high-frequency communications line.

5. The antenna system of claim 4, wherein said active element of the planar directional antenna located on the end face is made in the shape of a disk.

6. The antenna system of any claim (1 through 5), wherein the mounting elements of the active elements of planar directional antennas are made in the form of pins.

7. The antenna system of claim 6, wherein said connection between the active element of each antenna and the high-frequency communications line is arranged by means of one of the said pins, which is electrically conductive and isolated from the metallized external surface of the frame.

8. The antenna system of claim 6, wherein said connection between the active element of each antenna and the high-frequency communications line is arranged by means of two of the said pins, which are electrically conductive and isolated from the metallized external surface of the frame; with said pins contacting said active element in points located on orthogonal straight lines passing through the center of the active element; and the inner surface of each facet carries a power divider and a phase shifter made as sections of microstrip line and connected in series, through which the antenna commutation switch is connected to the active elements of said antennas.

9. The antenna system of claim 6, wherein said pins are cut in the body of said active element and bent during mounting.

10. The antenna system of claim 1, wherein the control unit for the antenna commutation switch control unit is located inside said frame.

11. The antenna system of claim 10, wherein said antenna switch control unit is mounted on the upper base of the frame, while the frame sits on its lower base using split connectors that are connected to the outputs of the control communications lines of the antenna commutation switch.

12. The antenna system of claim 1, wherein the frame is made in the shape of a regular right prism.

13. A planar directional antenna including a dielectric plate carrying a flat active antenna element mounted by means of mounting elements parallel to and spaced from said plate; with the surface of said plate that faces said active element being metallized and serving as antenna reflector; with said mounting elements made as pins cut in the body of the active antenna element and bent during mounting.

14. The antenna of claim 13, wherein one of the said pins is isolated from the metallized surface of said plate and is designed to provide connection with the high-frequency communications line.

15. The antenna of claim 14, wherein the surface of said plate, opposing the metallized one, is additionally equipped with a high-frequency communications line made as a microstrip connected to said pin.

16. The antenna of claim 13, wherein two of the said pins are isolated from the metallized external surface of said plate and are located on orthogonal straight lines passing through the center of the active element; with said pins providing connection with the high-frequency communications lines.

17. The antenna of claim 16, wherein the surface of said plate, opposing the metallized one, is additionally equipped with high-frequency communications lines, power divider and phase shifter made as microstrips and connected in series; with said phase shifter being connected to said pins.